

PATTERNS IN BLACK BEAR CUB ORPHANING IN WEST-CENTRAL MONTANA^{TWS}

Robert E. Henderson
Montana Fish, Wildlife and Parks
3201 Spurgin Road. Missoula, MT 59804

Montana Fish, Wildlife and Parks wardens and biologists in west-central Montana (Region 2) reported 29 instances of orphaned black bear (*Ursus americanus*) cubs for the 5-year period of 1997-2001. In the 10,650-mi² study area, 1147 black bears (768 males, 379 females) were reported harvested by hunters during the same period. No instance of orphaned grizzly bear (*U. arctos horribilis*) cubs was reported. In the 29 instances, wardens and biologists found and retrieved 43 black bear cubs. Frequency of orphaning varied from 1 to 12 cases/year, averaging 5.8 cases annually. Seventy-nine percent (23) of orphaning occurred in just 2 of the 5 years. Most orphaning (12) occurred in 2000 when western Montana experienced severe drought and numerous large wildfires. In 1998 FWP personnel reported almost as many orphan bear cases (11) when severe shortages of wild berry crops occurred across western Montana and northern Idaho. The direct cause of orphaning was not determined in 45 percent of the cases. In 16 cases for which cause was determined, hunting accounted for 6 (38%) of orphaning, 3 during the spring hunting seasons and 3 during fall hunting seasons. Other causes were motor vehicle collisions (25%), wildfires (19%), early emergence (6%), dogs (6%), and trapping of nuisance bears (6%). Orphaning occurred from March through December. July (1 case), August (7 cases), September (10 cases) and October (6 cases) accounted for 79 percent of orphaning during the 5 years. Timing (late summer/fall) of most orphaning and known causes (motor vehicles, wildfires, hunters, dogs, nuisance bear trapping) suggested that environmental factors contributed prominently to orphaning. In two years with the most orphaning, physiological stress induced by poor berry crops, drought, and wildfires, probably disrupted mother/cub social bonds and forced bears to forage in low-elevation (and human-occupied) habitats where females and cubs experienced higher mortality rates.